

IN THE CLAIMS

Please amend the claims as follows.

For the Examiner's convenience, a list of all claims is included below.

1. (Currently amended) A thermal interface material, comprising:
a binder material; and
a fusible filler within the binder material, the fusible filler randomly positioned with respect to the binder material and forming columnar structures within the binder material, the columnar structures formed during a reflow process from a plurality of fusible filler particles such that a cross-sectional area of the columnar structures is greater than a cross-sectional area of the fusible filler particles.

~~a plurality of non-fusible particles having a mean diameter of approximately 25 microns, within the binder material, the non-fusible particles randomly positioned with respect to the binder material, the fusible filler coated onto a portion of the non-fusible particles wherein a volume percent of the fusible filler to non-fusible particles is in a range of approximately 10—50 volume % fusible filler.~~

2 - 5 (Canceled)

6. (Previously presented) The thermal interface material of claim 1, wherein the binder material is a polymer.

7. (Previously presented) The thermal interface material of claim 1, wherein the binder material acts as an adhesive.
8. Canceled
9. (Previously presented) The thermal interface material of claim 1, wherein the fusible filler is a solder alloy having a solidus temperature above 100° C.
10. Canceled
11. (Currently amended) The thermal interface material of claim 1, wherein the fusible filler is 60 – 90 95 % by weight of the total weight of the thermal interface material.
- 12 – 14 (Canceled)
15. (Previously presented) The thermal interface material of claim 1, wherein the fusible filler has a melting temperature of approximately between 100 - 250° C.
16. (Previously presented) The thermal interface material of claim 1, wherein the fusible filler is stable to oxygen at temperatures up to approximately 150° C and relative humidity up to approximately 90%.
17. (Previously presented) The thermal interface material of claim 1, wherein the fusible filler is selected from the group consisting of indium based solders and tin based solder.

18 – 26 (Canceled)

27. (Previously presented) The thermal interface material of claim 9, wherein the solder alloy has a solidus temperature below 250° C.

28-31 (Canceled)

32. (New) A method of creating a thermal interface material comprising:
mixing a plurality fusible filler particles with a binder material such that the fusible filler particles are randomly positioned with respect to the binder material;
performing a reflow operation such that the fusible filler particles are fused into columnar structures within the binder material, the columnar structures having a cross-sectional area greater than a cross-sectional area of the fusible filler particles.

33. (New) The method of claim 32, wherein the binder material is a polymer.

34. (New) The method of claim 32, wherein the fusible filler particles comprise a material selected from the group consisting of indium based solders and tin based solder.

35. (New) The method of claim 32, wherein the fusible filler particles comprise a solder alloy having a solidus temperature above 100° C.

36. (New) The method of claim 35, wherein the solder alloy has a solidus temperature below 250° C.
37. (New) The method of claim 32, wherein the fusible filler particles comprise 60 – 95 % by weight of the total weight of the thermal interface material.
38. (New) The method of claim 32, wherein the fusible filler particles have a melting temperature of approximately between 100 - 250° C.
39. (New) The method of claim 32, wherein the fusible filler particles are stable to oxygen at temperatures up to approximately 150° C and relative humidity up to approximately 90%.